DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A9EA
Revision 13
Viking Air Limited
(Twin Otter)
DHC-6-1
DHC-6-100
DHC-6-200
DHC-6-300

October 3, 2007

TYPE CERTIFICATE DATA SHEET NO. A9EA

This data sheet which is a part of type certificate No. A9EA prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder	Viking Air Limited 9574 Hampden Road Sidney, British Columbia Canada V8L 5V5
Type Certificate Holder Record	Bombardier Inc. Regional Aircraft 123 Garratt Boulevard Downsview, Ontario, Canada M3K 1Y5 de Havilland, Inc. 123 Garratt Boulevard Downsview, Ontario, Canada M3K 1Y5

I - Model DHC-6-1 (Prototype and four Pre-Production A/C) (Normal Category), Approved June 22, 1966 by the FAA and April 7, 1966 by the Canadian Department of Transport (DOT)

Engines

2 United Aircraft of Canada, Limited PT6A-20

Fuel

MIL-J-5624E, Grades JP-1, JP-4, JP-5, or Arctic Diesel Fuel to UACL Specification CPW 46. (MIL-G-5572C Avgas (all grades) for emergency use only limited to 150 hours use in any one overhaul cycle.)

Oil

Synthetic types conforming to CPWA 202, latest issue,
(UACL PT6 Engine Service Bulletin No. 1 lists approved brand oils.)

Engine rating

RATING	E.S.H.P.	S.H.P.
Take-off (5 min.)	*579	*550
Max. continuous	*579	*550

*Available to 70°F (21°C) Ambient Temperature

Engine limits

Temperature Limits (Inter-Turbine)

Take-off	1380° F	(750° C)
Max. Continuous	1380°F	(750° C)
Starting (2 sec.)	1994°F	(1090° C)

Torque Limits

Take-off	42.5 p.s.i. (1315 ft. lb.)
Max. Continuous	42.5 p.s.i. (1315 ft. lb.)

Gas Generator

Take-off	38,100 r.p.m. (101.5%)
Max. Continuous	38,100 r.p.m. (101.5%)

Oil Temperature

Starting	-40°C Min.
Take-off	10°C to 99°C
Max. Continuous	10°C to 99°C

Oil Pressure

Normal	(28,000 r.p.m. & above)	65 to 85 p.s.i.g.

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Min. (below 28,000 r.p.m.) 40 p.s.i.g.

Propeller

Hartzell
Hub HC-B3TN-3, -3B, -3BY
Blades T10173+1, T10173E+1
Diameter 8 ft. 6 in. nominal (8 ft. 4 in. minimum after repairs)

Pitch Settings at 30" Station
Feather +87°
Take-off Low Pitch +17°
Idle Blade Angle +12°
Reverse Blade Angle - 9°

Propeller limits

Propeller (Np) - Take-off 2200 r.p.m. (100%)
Max. Continuous 2200 r.p.m. (100%)

Airspeed limits (CAS)

	Landplane		Skiplane & Floatplane	
	M.P.H.	Knots	M.P.H.	Knots
V_{ne} (Never exceed)	232.7*	202*	210.8*	183*
V_{no} (Max. structural cruising)	184.3**	160**	184.3**	160**
V_p (Maneuvering)	149.8***	130***	149.8***	130***
V_{mc} (Minimum control)	73.7	64	73.7	64
V_{fe} (Flaps extended) 0° to 20°	115.2	100	115.2	100
V_{fe} (Flaps extended) 20° to 40°	97.9	85	97.9	85

* *Reduce Vne 4.6 m.p.h. (4K) per 1000 ft. above 10000 ft.*
** *Reduce Vno 3.5 m.p.h. (3K) per 1000 ft. above 10000 ft.*
*** *Reduce Vp - Vno above 20000 ft.*

C.G. range (Landing gear fixed)

Landplane and Skiplane

Forward Limit 20% M.A.C. (STA. 203.84) at all weights up to max. of 11000 lb.
Aft Limit 36% M.A.C. (STA. 216.32) at all weights up to max. of 11000 lb.

Floatplane

Forward Limit 25% M.A.C. (STA. 207.74) at all weights up to max. of 11000 lb.
Aft Limit 32% M.A.C. (STA. 213.20) at all weights up to max. of 11000 lb.

Empty weight C.G. range

None

Maximum weights

Landplane
Take-off 11000 lb.
Landing 11000 lb.

Skiplane
Take-off 11000 lb. (with Item 201(a) and (b))
Landing 11000 lb. (with Item 201(a) and (b))

Floatplane
Take-off 11000 lb. (with Item 202(a))
Landing 11000 lb. (with Item 202(a))

Minimum Crew

One (pilot). (+95.0 in.)

No. of seats

16 (including two at Stn. +95.0 in.) - Limited by approved seating arrangement. (See Weight and Balance Handbook).

Max. 17 (including two at Stn. +95.0 in.) -Limited by emergency exit requirements. (Approval of seating arrangement is required).

Cargo loading conditions

See Weight and Balance Handbook PSM 1-6-8

Maximum baggage

200 lb. max. in forward compartment (arm +41.0 in.)
500 lb. max. in rear compartment (arm +354.0 in.)

See Weight and Balance Handbook.

Fuel capacity

*USABLE FUEL		U.S. GALS.	IMPERIAL GALS.
Forward Tank	(+162.5 in.)	176	147
Rear Tank	(+240.0 in.)	182	152
TOTAL		358	299

**See NOTE 1(b) for Weight and Balance.*

Oil capacity

*USABLE OIL		U.S. GALS.	IMPERIAL GALS.	WEIGHT LB.
Port	(+177.0 in.)	1.5	1.2	11
Starboard	(+177.0 in.)	1.5	1.2	11
TOTAL		3.0	2.4	22

** See NOTE 1(c) for Weight and Balance.*

Maximum Operating Altitude

25000 ft. (when supplementary breathing equipment is provided for all occupants).

Control surface movements

Aileron (with flaps up)		Up 17.5°	Down 16°
(with flaps in landing position)		Up 25°	Down 17.5°
Trim Tab		- or + 15°	
Geared Tab (flap up)		Up 16°	Down 17.5°
Flaps (inboard forward)		0° to 40°	
(inboard trailing)		0° to 62.5°	
(outboard forward)		0° to 26°	
(outboard trailing)		(aileron)	
Elevator		Up 25°	Down 16°
Tab		Up 20°	Down 25°
Flap interconnect	(flap up)	Down 12°	
	(flap landing)	Up 12°	
Rudder		Left 20°	Right 21°
Geared Tab		- or + 11°	
Trim Tab		- or + 25°	

See Maintenance Manual PSM-1-6-2 for procedure to rig control surface movements from stop to stop.

Serial Nos. eligible

1 to 5 inclusive. The Canadian Department of Transport Certificate of Airworthiness for export endorsed as noted under "Import Eligibility" must be submitted for each individual aircraft for which application for certification is made.

Import eligibility

A U.S. Airworthiness Certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by or for the Minister of Transport. This form must contain the following statement: "This certifies that the aircraft described below has been manufactured in conformity with data forming the basis for D.O.T. Type Approval No. A-82, Issue 2, dated July 29, 1966. (FAA Type Certificate No. A9EA)."

Certification basis

CAR 3 dated May 15, 1956 and Amendments 3-1 to 3-8 inclusive, plus Special Conditions for Multi-Engine Turbine Powered Aircraft dated November 6, 1964. Type Certificate No. A9EA issued June 22, 1966. Not approved for use in operations under FAR Part 135 after May 31, 1972, when FAR 135.144 becomes mandatory. (See NOTE 3). Date of application for Type Certificate April 2, 1964.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification and is given in Bombardier Report A.E.R.O.C. 6.6.G.1. In addition, the following item of equipment are required:

(a) Canadian D.O.T. approved Airplane Flight Manual, PSM-1-61-1A.

II - Model DHC-6-100 (Normal Category), Approved August 1, 1966 by the FAA and July 29, 1966 by the Canadian Department of Transport (DOT). (First Production Series)

Engines: 2 United Aircraft of Canada, Limited PT6A-20

Fuel: MIL-J-5624E, Grades JP-1, JP-4, JP-5, or Arctic Diesel Fuel to UACL Specification CPW 46. (MIL-G-5572C Avgas (all grades) for emergency use only limited to 150 hours use in any one overhaul cycle.)

Oil: Synthetic types conforming to CPWA 202, latest issue,
(UACL PT6 Engine Service Bulletin No. 1 lists approved brand oils.)

Engine rating

RATING	E.S.H.P.	S.H.P.
Take-off (5 min.)	*579	*550
Max. continuous	*579	*550

**Available to 70°F (21°C) Ambient Temperature*

Engine limits

Temperature Limits (Inter-Turbine)

Take-off	1380°F	(750°C)
Max. Continuous	1380°F	(750°C)
Starting (2 sec.)	1994°F	(1090°C)

Torque Limits

Take-off	42.5 p.s.i.	(1315 ft.-lb.)
Max. Continuous	42.5 p.s.i.	(1315 ft.-lb.)

Gas Generator

Take-off	38,100 r.p.m.	(101.5%)
Max. Continuous	38,100 r.p.m.	(101.5%)

Oil Temperature

Starting	-40°C Min.
Take-off	10°C to 99°C
Max. Continuous	10°C to 99°C

Oil Pressure

Normal (28,000 r.p.m. & above)	65 to 85 p.s.i.g.
Min. (below 28,000 r.p.m.)	40 p.s.i.g.

Propeller: Hartzell

Hub	HC-B3TN-3, -3B, -3BY
Blades	T10173+1, T10173E+1
Diameter	8 ft. 6 in. nominal (8 ft. 4 in. minimum after repairs)

Pitch Settings at 30" Station

Feather	+87°
Take-off Low Pitch	+16°
Idle Blade Angle	+12°
Reverse Blade Angle	-14°

Propeller limits

Propeller (Np) - Take-off	2200 r.p.m.	(100%)
Max. Continuous	2200 r.p.m.	(100%)

Airspeed limits (CAS)

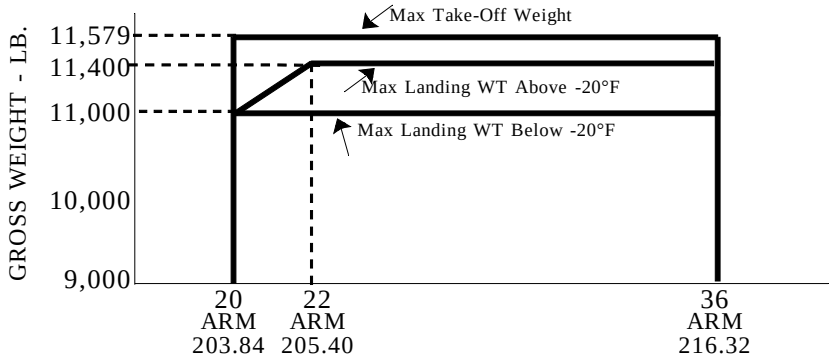
	Landplane		Skiplane & Floatplane	
	M.P.H.	Knots	M.P.H.	Knots
V_{ne} (Never exceed)	232.7*	202*	210.8*	183*
V_{no} (Max. structural cruising)	184.3**	160**	184.3**	160**
V_p (Maneuvering)	149.8***	130***	149.8***	130***
V_{mc} (Minimum control)	73.7	64	73.7	64
V_{fe} (Flaps extended) 0° to 20°	115.2	100	115.2	100
V_{fe} (Flaps extended) 20° to 40°	97.9	85	97.9	85

**Reduce Vne 4.6 mph (4K) per 1000 ft. above 10000 ft.*
***Reduce Vno 3.5 mph (3K) per 1000 ft. above 10000 ft.*
****Reduce Vp - Vno above 20000 ft.*

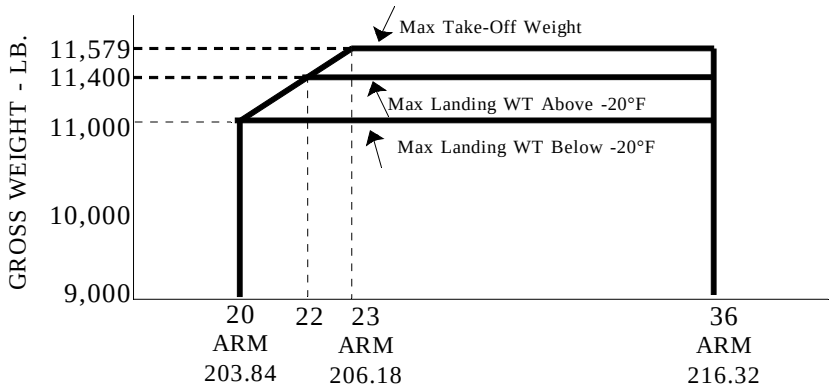
C.G. range (Landing gear fixed)

Without Mod. 6/1020 - Same as Model 1
With Mod. 6/1020 - "Fuselage Beam, Front Wing Spar Reinforcing"

LANDPLANE



SKIPLANE



FLOATPLANE

Forward Limit	25% M.A.C. (STA. 207.74) at all weights up to max. of 11,600 lb.
Aft Limit	32% M.A.C. (STA. 213.20) at all weights up to max. of 11,600 lb.

Empty weight C.G. range: None

Maximum weights: With Mod. 6/1020 - "Fuselage Beam, Front Wing Spar Reinforcing"

	Landplane (lb.)	Skiplane (lb.) (With Item 201(a)&(b))	Floatplane (lb.) (With Item 202(a)&(b))
Take-off	11579	11579	11600
Landing	11400*	11400*	11600

**See NOTE 5 - Temperature Limitations*
Without Mod. 6/1020 - Same as Model 1.

Minimum Crew: One (pilot). (+95.0 in.)

No. of seats: 21 (including two at Stn. +95.0 in.) - Limited by approved seating arrangement. (See Weight and Balance Handbook).

Max. 24 (including two at Stn. +95.0 in.) -Limited by emergency exit requirements. (Approval of seating arrangement is required).

Cargo loading limitations

See Weight and Balance Handbook PSM 1-6-8

Maximum baggage

200 lb. max. in forward compartment (arm +41.0 in.)
500 lb. max. in rear compartment (arm +354.0 in.)
See Weight and Balance Handbook.

Fuel capacity

*USABLE FUEL	U.S. GAL.	IMPERIAL GAL.
Forward Tank (+162.5 in.)	181	151
Rear Tank (+240.0 in.)	197	164
TOTAL	378	315

**See NOTE 1(b) for Weight and Balance.*

Oil capacity

**USABLE OIL	U.S. GAL.	IMPERIAL GAL.	WEIGHT LB.
Port (+177.0 in.)	1.5	11.2	11
Starboard (+177.0 in.)	1.5	1.2	11
TOTAL	3.0	2.4	22

*** See NOTE 1(c) for Weight and Balance.*

Maximum Operating Altitude

25000 ft. (when supplementary breathing equipment is provided for all occupants).

Control surface movements

Aileron (with flaps up)		Up 17.5° Down 16°
(with flaps in landing position)		Up 25° Down 17.5°
Trim Tab	- or + 15°	
Geared Tab (flap up)		Up 16° Down 17.5°
Flaps (inboard forward)		0° to 40°
(inboard trailing)		0° to 62.5°
(outboard forward)		0° to 26°
(outboard trailing)		(aileron)
Elevator		Up 25° Down 16°
Tab		Up 20° Down 25°
Flap interconnect (flap up)		Down 12°
	(flap landing)	Up 12°
Rudder	Left 20° Right 21° *	
Geared Tab	- or + 11°	
Trim Tab	- or + 25°	

See Maintenance Manual Part No. PSM-1-6-2 for procedure to rig control surface movements from stop to stop.

**When Item 202(b) is incorporated then the rudder travel limits are: Left 17° Right 21°.*

Serial Nos. eligible

6 to 115 inclusive. The Canadian Department of Transport Certificate of Airworthiness for export endorsed as noted under "Import Eligibility" must be submitted for each individual aircraft for which application for certification is made.

Import eligibility

A U.S. Airworthiness Certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by or for the Minister of Transport. This form must contain the following statement: "This certifies that the aircraft described below has been manufactured in conformity with data forming the basis for D.O.T. Type Approval No. A-82, Issue 3, dated June 12, 1967. (FAA Type Certificate No. A9EA)."

Certification basis

CAR 3 dated May 15, 1956 and Amendments 3-1 to 3-8 inclusive, plus Special Conditions for Multi-Engine Turbine Powered Aircraft dated November 6, 1964. Type Certificate No. A9EA issued June 22, 1966. Date of application for Type Certificate April 2, 1964.

For this Model airplane intended for use in operations under FAR Part 135, the additional airworthiness requirements of Special Federal Aviation Regulation (SFAR) 23, dated January 7, 1969, and Amendment 1 to SFAR 23, dated December 24, 1969, are also included. See NOTES 3 and 8.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification and is given in Bombardier Report A.E.R.O.C. 6.6.G.1. In addition, the following item of equipment are required:

(a) Canadian D.O.T. approved Airplane Flight Manual, Part No. PSM-1-61-1A.

III - Model DHC-6-200 (Normal Category), Approved April 1, 1968 by the FAA and March 29, 1968 by the Canadian Department of Transport (DOT).

This Series may be identified by:

(1) Aircraft nose configuration, See NOTE 6 for optional BI Mod. 6/1077 - Extended Nose that Increases the Volume and Weight Capacity of the Forward Baggage Compartment; and,

(2) BI Mod. 6/1075 (Retrofit) or 6/1076 (New Production) -Increase in the Volume of the Rear Baggage Compartment.

Engines

2 United Aircraft of Canada, Limited PT6A-20

Fuel

MIL-J-5624E, Grades JP-1, JP-4, JP-5, or Arctic Diesel Fuel to UACL Specification CPW 46. (MIL-G-5572C Avgas (all grades) for emergency use only limited to 150 hours use in any one overhaul cycle.)

Oil

Synthetic types conforming to CPWA 202, latest issue,
(UACL PT6 Engine Service Bulletin No. 1 lists approved brand oils.)

Engine rating

RATING	E.S.H.P.	S.H.P.
Take-off (5 min.) *579	*550	
Max. continuous *579		*550

**Available to 70°F (21°C) Ambient Temperature*

Engine limits

Temperature Limits (Inter-Turbine)

Take-off	1380° F	(750° C)
Max. Continuous	1380°F	(750° C)
Starting (2 sec.)	1994°F	(1090° C)

Torque Limits

Take-off	42.5 p.s.i. (1315 ft.-lb.)
Max. Continuous	42.5 p.s.i. (1315 ft.-lb.)

Gas Generator

Take-off	38,100 r.p.m. (101.5%)
Max. Continuous	38,100 r.p.m. (101.5%)

Oil Temperature

Starting	-40°C Min.
Take-off	10°C to 99°C
Max. Continuous	10°C to 99°C

Oil Pressure

Normal	(28,000 r.p.m. & above)	65 to 85 p.s.i.g.
Min.	(below 28,000 r.p.m.)	40 p.s.i.g.

Propeller

Hartzell

Hub	HC-B3TN-3, -3B, -3BY
Blades	T10173+1, T10173E+1
Diameter	8 ft. 6 in. nominal (8 ft. 4 in. after repairs)

Pitch Settings at 30" Station

Feather	+87°
Take-off Low Pitch	+16°
Idle Blade Angle	+12°
Reverse Blade Angle	-14°

Propeller limits

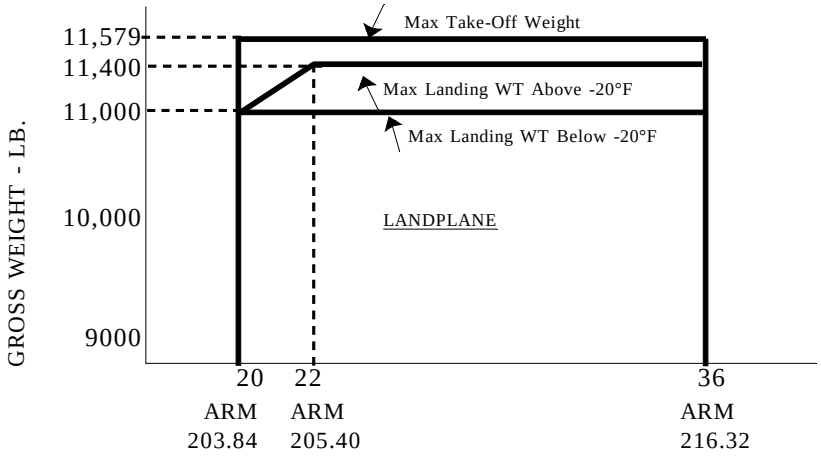
Propeller (Np) - Take-off 2200 r.p.m. (100%)
Max. Continuous 2200 r.p.m. (100%)

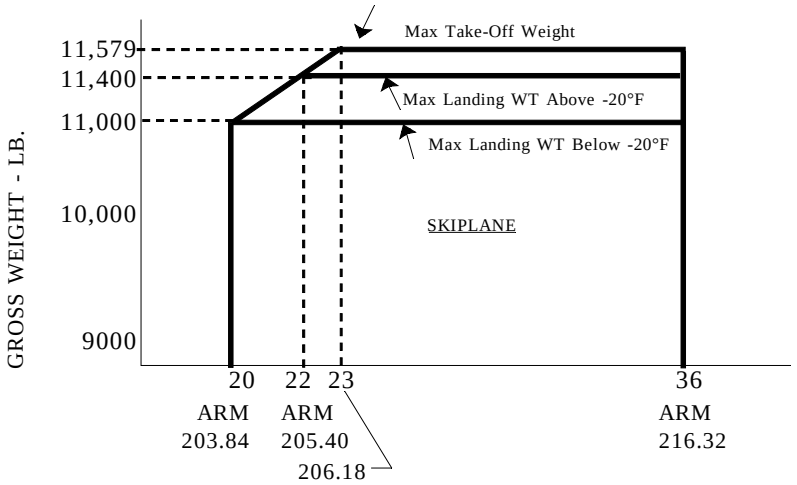
	Landplane		Skiplane		Floatplane	
Airspeed Limits (CAS)	Knots	M.P.H.	Knots	M.P.H.	Knots	M.P.H.
Vne (never exceed)	202*	232.7*	183*	211*	183*	211*
Vno (max. structural cruising)	160**	184.3**	160**	184.3**	160**	184.3**
Vp (design maneuvering)	130***	149.8***	130***	149.8***	130***	149.8***
Vmc (minimum control)	68	78.3	68	78.3	64	78.3
Vfe (flaps extended) 0° to 20°	100	115.2	100	115.2	100	115.2
Vfe (flaps extended) 20° to 40°	85	97.9	85	97.9	85	97.9

**Reduce Vne 4.6 m.p.h. (4K) per 1000 ft. above 10000 ft.*
***Reduce Vno 3.5 m.p.h. (3K) per 1000 ft. above 10000 ft.*
****Reduce Vp - Vno above 20000 ft.*

C.G. range (Landing gear fixed)

With Mod. 6/1020 - "Fuselage Beam, Front Wing Spar Reinforcing" (All Model DHC-6-200 Aircraft Serial Nos. 116 to 230 inclusive have this Mod. embodied).





Floatplane	Forward Limit	25% M.A.C. (STA. 207.74) at all weights up to max. of 11,600 lb.
	Aft Limit	32% M.A.C. (STA. 213.20) at all weights up to max. OF 11,600 lb.

Empty weight C.G. range: None

	Landplane (lb.)	Skiplane (lb.) (With Item 201(a)&(b))	Floatplane (lb.) (With Item 202(a)&(b))
Take-off	11579	11579	11600
Landing	11400*	11400*	11600

**See NOTE 5 - Temperature Limitations*

Minimum Crew: One (pilot). (+95.0 in.)

No. of seats: 21 (including two at Stn. +95.0 in.) - Limited by approved seating arrangement. (See Weight and Balance Handbook).

Max. 24 (including two at Stn. +95.0 in.) -Limited by emergency exit requirements. (Approval of seating arrangement is required).

Cargo loading limitations: See Weight and Balance Handbook (PSM 1-6-8)

Maximum baggage

Forward - Short Nose	(+ 41.0 in.)	200 lb. Max.
Forward - Long Nose (Mod. 6/1077)	(+25.0 in.)	300 lb. Max.
Rear	(+354.0 in.)	500 lb. Max.*
Rear Extension	(+391.0 in.)	50 lb. Max.*

**Total Rear + Rear Extension not to exceed 500 lb. maximum.*

Fuel capacity

*USABLE FUEL	U.S. GALS.	IMPERIAL GALS.
Forward Tank (+162.5 in.)	181	151
Rear Tank (+240.0 in.)	197	164
TOTAL	378	315

**See NOTE 1(b) for Weight and Balance.*

Oil capacity

**USABLE OIL	U.S. GALS.	IMPERIAL GALS.	WEIGHT LB.
Port (+177.0 in.)	1.5	1.2	11
Starboard (+177.0 in.)	1.5	1.2	11
TOTAL	3.0	2.4	22

*** See NOTE 1(c) for Weight and Balance.*

Maximum Operating Altitude: 25000 ft. (when supplementary breathing equipment is provided for all occupants).

Control surface movements

Aileron (with flaps up)		Up 17.5°	Down 16°
(with flaps in landing position)	Up 25°	Down 17.5°	
Trim Tab		+ or -15°	
Geared Tab (flap up)		Up 16°	Down 17.5°
Flaps (inboard forward)	0° to 40°		
(inboard trailing)	0° to 62.5°		
(outboard forward)	0° to 26°		
(outboard trailing)	(aileron)		
Elevator	Up 25°	Down 16°	
Tab		Up 20°	Down 25°
Flap interconnect (flap up)	Down 12°		
(flap landing)		Up 12°	
Rudder		Left 20°	Right 21° *
(Skiplane)	Left 18°	Right 21°	
Geared Tab		+ or -11°	
Trim Tab		+ or -25°	

See Maintenance Manual Part No. PSM-1-6-2 for procedure to rig control surface movements from stop to stop.

** When Item 202(b) is incorporated then the rudder travel limits are:*
Left 17° Right 21°.

Serial Nos. eligible	116 to 230 inclusive (except 130 and 210) plus any other Series aircraft that has been modified to embody the following significant Model Mod. 6/1020, 1075 or 1076, 1077. The Canadian Department of Transport Certificate of Airworthiness for export endorsed as noted under "Import Eligibility" must be submitted for each individual aircraft for which application for certification is made.
Import eligibility	A U.S. Airworthiness Certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by or for the Minister of Transport. This form must contain the following statement: "This certifies that the aircraft described below has been manufactured in conformity with data forming the basis for D.O.T. Type Approval No. A-82, Issue 4, dated December 20, 1968 (FAA Type Certificate No. A9EA)."
Certification basis	CAR 3 dated May 15, 1956 and Amendments 3-1 to 3-8 inclusive, plus Special Conditions for Multi-Engine Turbine Powered Aircraft dated November 6, 1964. Type Certificate No. A9EA issued June 22, 1966. Date of application for Type Certificate April 2, 1964. For this Model airplane intended for use in operations under FAR Part 135, the additional airworthiness requirements of Special Federal Aviation Regulation (SFAR) 23, dated January 7, 1969, and Amendment 1 to SFAR 23, dated December 24, 1969, are also included. See NOTES 3 and 8.
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification and is given in Bombardier Report A.E.R.O.C. 6.6.G.1. In addition, the following item of equipment is required: (a) Canadian D.O.T. approved Airplane Flight Manual, PSM-1-62-1A.

IV - Model DHC-6-300 (Normal Category), Approved May 8, 1969 by the FAA and April 25, 1969 by the Canadian Department of Transport (DOT).

This is the third production series of the Type DHC-6. This series is identified primarily on basis of:

(1) PT6A-27 engine in place of -20 engine;

(2) Increase in All-Up-Weight to the maximum allowed by CAR 3 of 12,500 lb.:

(3) Addition of two forward exits and deletion of roof exit; and,

(4) Aircraft nose configuration, See NOTE 6 for optional BI Mod. 6/1077 - Extended Nose that Increases the Volume and Weight Capacity of the Forward Baggage Compartment.

Engines	2 United Aircraft of Canada, Limited PT6A-27
Fuel	MIL-J-5624E, Grades JP-1, JP-4, JP-5, or Arctic Diesel Fuel to UACL Specification CPW 46. (MIL-G-5572C Avgas (all grades) for emergency use only - limited to 150 hours use in any one overhaul cycle.)
Oil	Synthetic types conforming to CPWA 202, latest issue. (UACL PT6 Engine Service Bulletin No. 1 lists approved brand oils.)

Engine rating

RATING	E.S.H.P.	S.H.P.
Take-off	652*	620*
Max. continuous	652*	620*

**Available to 91°F (33°C) Ambient Temperature (S.L.)*

Engine limits

Temperature Limits (Inter-Turbine)

Take-off	1336°F	(725° C)
Max. Continuous	1336°F	(725° C)
Starting (2 sec.)	1994°F	(1090° C)

Torque Limits

Take-off	50 p.s.i. (1536 ft.-lb.)
Max. Continuous	50 p.s.i. (1536 ft.-lb.)

Gas Generator

Take-off	38,100 r.p.m. (101.5%)
Max. Continuous	38,100 r.p.m. (101.5%)

Oil Temperature

Starting	-40°C Minimum
Take-off	10°C to 99°C
Max. Continuous	10°C to 99°C
5 Minute Limit	104°C

Oil Pressure

Normal (28,000 r.p.m. & above)	80 to 100 p.s.i.g.
Min. (below 28,000 r.p.m.)	40 p.s.i.g.

Propeller

Hartzell

Hub	HC-B3TN-3D (Y)*
Blades	T10282H (B)**+0
Diameter	8 ft. 6 in. nominal (8 ft. 4 in. after repairs)

**(Y) designates Zero Thrust Latches*
***(B) designates De-icing Boots.*

Pitch Settings at 30" Station

Feather	+87°
Take-off Low Pitch	+17°
Idle Blade Angle	+11°
Reverse Blade Angle	-15°

Propeller limits

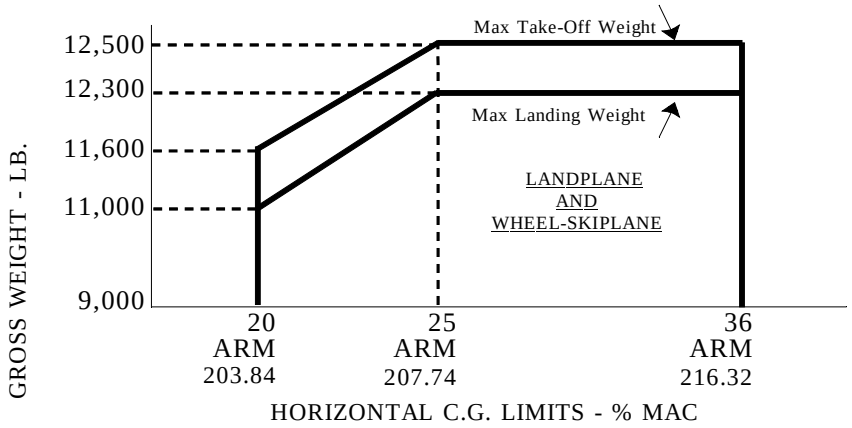
Propeller (Np) - Take-off	2110 r.p.m. (96%)
Max. Continuous	2110 r.p.m. (96%)

Airspeed limits (CAS)

	Landplane		Floatplane	
	Knots	M.P.H.	Knots	M.P.H.
Vmo (Max. Operating) S/L	160	184.3	160	184.3
5000 ft.	155	179	155	179
10000 ft.	150	173	150	173
15000 ft.	145	167	145	167
20000 ft.	130	149.8	130	149.8
25000 ft.	115	132.5	115	132.5
V_p (Design maneuvering)	136*	156.7*	136*	156.7*
V_{mc} (Minimum control)	66	76	67	76
V_{fe} (Flaps extended)				
0° to 20°	102	117.5	102	117.5
10 to 37-1/2°	95	109.5	95	109.5

**Reduce Vp to Vmo above 18000 ft.*

C.G. range (Landing gear fixed)



Floatplane Forward Limit 25% M.A.C. (STA. 207.74) at all weights up to max. of 12500 lb.

Aft Limit 32% M.A.C. (STA. 213.20) at all weights up to max. of 12500 lb.

Empty weight C.G. range: None

Maximum weights

	Landplane (lb.) (With Item 201(a) or (b))	Floatplane (lb.) (With Item 202(a)	Skiplane (lb.)
Take-off	12500	12500	12500
Landing	12300*	12500	12300*

* Main Wheel Tire Pressure 38 p.s.i.g.
(Below -20°F) 34 p.s.i.g.

Minimum Crew: One pilot. (+95.0 in.)

No. of seats: 22 (including two at Stn. +95.0 in.) - Limited by approved seating arrangement. (See Weight and Balance Handbook).

Cargo loading limitations: See Weight and Balance Handbook (PSM 1-63-8)

Maximum baggage

Forward - Short Nose	(+ 41.0 in.)	200 lb. Max.
Forward - Long Nose (Mod. 6/1077)	(+25.0 in.)	300 lb. Max.
Rear	(+354.0 in.)	500 lb. Max.*
Rear Extension	(+391.0 in.)	150 lb. Max.*

* Total Rear + Rear Extension not to exceed 500 lb. maximum.
See Item 208(a) for approved baggage pod installation.

Fuel capacity

*USABLE FUEL		U.S. GAL.	IMPERIAL GAL.
Forward Tank	(+162.5 in.)	181	151
Rear Tank	(+240.0 in.)	197	164
TOTAL		378	315

**See NOTE 1(b) for Weight and Balance.*

Oil capacity

*USABLE OIL		U.S. GAL.	IMPERIAL GAL.	WEIGHT LB.
Port	(+177.0 in.)	1.5	1.2	11
Starboard	(+177.0 in.)	1.5	1.2	11
TOTAL		3.0	2.4	22

** See NOTE 1(c) for Weight and Balance.*

Maximum Operating Altitude	25000 ft. (when supplementary breathing equipment is provided for all occupants).
Control surface movements	Aileron (with flaps up) Up 17.5° Down 16° (with flaps in landing position) Up 25° Down 17.5° Trim Tab + or -15° Geared Tab (flap up) Up 16° Down 17.5° Flaps (inboard forward) 0° to 40° (inboard trailing) 0° to 62.5° (outboard forward) 0° to 26° (outboard trailing) (aileron) Elevator Up 25° Down 16° Tab Up 20° Down 25° Flap interconnect (flap up) Down 12° (flap landing) Up 12° Rudder Left 17° Right 21° Geared Tab Left -5.5° Right +10° Trim Tab + or -25° See Maintenance Manual Part No. PSM-1-6-2 for procedure to rig control surface movements from stop to stop.
Serial Nos. eligible	130, 210, 231 and subsequent. The Canadian Department of Transport Certificate of Airworthiness for export endorsed as noted under "Import Eligibility" must be submitted for each individual aircraft for which application for certification is made.
Import eligibility	A U.S. Airworthiness Certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by or for the Minister of Transport. This form must contain the following statement: "This certifies that the aircraft described below has been manufactured in conformity with data forming the basis for D.O.T. Type Approval No. A-82, Issue 5, dated September 10, 1969. (FAA Type Certificate No. A9EA)."
Certification basis	CAR 3 dated May 15, 1956 and Amendments 3-1 to 3-8 inclusive, plus Special Conditions for Multi-Engine Turbine Powered Aircraft dated November 6, 1964. Type Certificate No. A9EA issued June 22, 1966. Date of Application for Type Certificate April 2, 1964. For this Model airplane intended for use in operations under FAR Part 135, the additional airworthiness requirements of Special Federal Aviation Regulation (SFAR) 23, dated January 7, 1969, and Amendment 1 to SFAR 23, dated December 24, 1969, are also included. See NOTES 3 and 8.
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification and is given in Bombardier Report A.E.R.O.C. 6.6.G.1. In addition, the following item of equipment is required: (a) Canadian D.O.T. approved Airplane Flight Manual, PSM-1-63-1A.

Data Pertinent to All Models

Datum	Station 0 is 109.32 inches forward of a jig point which is marked by a plate attached to the bulkhead between the cockpit and the cabin.
M.A.C.	78 inches. (The L.E. is at Station 188.24).
Leveling means	The cabin floor rails provide a surface for levelling the airplane both laterally and longitudinally. The cabin floor level is 15 inches below water line zero.
Equipment	The list approved equipment, including the basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) which must be installed in the aircraft for certification, is given in Bombardier Report A.E.R.O.C. 6.6.G.1.

Approved Installations

Item 201 - Ski Installations

(a) Wheel/Ski
Bristol Model 3000 nose-wheel/ski and Model 5500 main-wheel/ski installed to BI Drawing C6-US-1000, G.A. Ski Installation. Applicable to Model DHC-6-1, -100, -200, and -300 Aircraft. Aircraft to be operated in accordance with appropriate DOT Approved BI Flight Manual Supplement.

(b) Spring Skis
Skis installed to BI Installation Drawing C6-US-1001. Applicable to Model DHC-6-1 and -100 Aircraft.

Item 202 - Float Installations

(a) CAP Model 12000 Floats on Models 1, 100 and 200 Aircraft, up to 11600 lb., or CAP Model 12000A and 12000B Floats on Model 300 Aircraft up to 12500 lb. installed to BI Drawing C6-UF-1000 G.A. Floatplane. Ref. DOT Float Type Approval F-10.

(b) CAP Models 12000, 12000A or 12000B Floats modified in accordance with Field Aviation Company Limited Drawing No. 84193 to provide capability of loading and dropping water. Water Bomber aircraft are to be operated in accordance with DOT Approved Flight Manual Amendment contained in Field Aviation Company Report No. 6035. Water Bomber equipment is to be maintained in accordance with Field Aviation Company Report No. 4889. The operation of water bomber aircraft is within the following limitations:

(i) Model 100 and 200 Aircraft:
CAP 12000 Floats
Aircraft Gross Weight 11600 lb. at C.G. Limits of 25% to 32% MAC with DH Mod. 6/1020 embodied.
Maximum Water Capacity in Two Floats 425 Imperial Gal. Total.
Maximum Fuselage Cargo 500 lb.
Rudder travel Limits are: Left 17°, Right 21°.

(ii) Model 300 Aircraft:
CAP 12000A or 12000B Floats
Aircraft Gross Weight 12500 lb. at C.G. Limits of 25% to 32% MAC.
Maximum Water Capacity in Two Floats 450 Imperial Gal. Total.
Maximum Fuselage Cargo 500 lb.
Rudder travel Limits are: Left 17°, Right 21°.

Item 203 - Intermediate Flotation Gear

(a) BI Intermediate Flotation Gear Installed to BI Drawing C6-U-1000. Applicable to Models DHC-6-1, -100, -200 and -300 Aircraft. Aircraft to be operated in accordance with appropriate DOT Approved BI Flight Manual Supplement.

Item 204 - Aircraft Ice Protection

(a) Approved for operation in icing when equipped with following BI Modifications:

6/1043, 6/1066, 6/1089, S.O.O. 6004, S.O.O. 6005, S.O.O. 6006, S.O.O. 6009 and either S.O.O. 6007 or 6008.

Applicable to Model DHC-6-1, -100, -200 and -300 Aircraft.
Aircraft to be operated in accordance with appropriate DOT Approved BI Flight Manual Supplement.

Item 205 - Auto-pilot Installation

(a) Bendix M-4C Automatic Flight Control System installed to Field Aviation Co. Ltd. Drawing J-500 061 per STA. SA67-7 for Model DHC-6-100. Aircraft to be operated in accordance with the April 22, 1968 issue of the M-4C Supplement to the DHC-6 Flight Manual.

Item 206 - Interior Installation
(a) Commuter interior installation installed to Field Aviation Co., Ltd. Report 4961 dated September 25, 1968.

Item 207 - Avionics Installation
(a) Avionics equipment installed to Field Aviation Co., Ltd. Report 4962 dated September 26, 1968.
(b) Avionics equipment installed in accordance with Technical Enterprise Limited Report TELAIR DHC-6.

Item 208 - Baggage Pod Installation
(a) For Model DHC-6-300, baggage pod installation when installed and operated in accordance with Field Aviation Co., Ltd. Report No. 6093 dated 29 March 1971.

NOTES

NOTE 1. (a) The current Weight and Balance Handbook, Part Number PSM-1-6-8, for all Models except the 300 and PSM-1-63-8 for the Model DHC-6-300, giving the list of equipment included in the empty weight and loading instructions, must be in each aircraft except in the case of operators having an approved weight control system.

(b) The following amount of unusable fuel is included in the empty weight:

	MODEL 1		ALL OTHER MODELS	
	U.S. GAL.	IMPERIAL GAL.	U.S. GAL.	IMPERIAL GAL.
Unusable	7.25	6.0	3.5	3.0

(c) For weight and balance purposes the total oil including system and tank is included in the empty weight and equals 54 lb. at +177 in.

NOTE 2. The following placards must be displayed in clear view of the pilot at all times:

(a) "THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS AND MANUALS."

(b) "NO ACROBATIC MANEUVERS (INCLUDING SPINS) ARE APPROVED."

(c) "DAY, NIGHT, VFR."

(d) "IFR" when the aircraft is equipped in accordance with the requirements for the operation intended, and either -

(1) Vacuum system warning light installed to BI Mod. 6/1014 to alert pilots of low vacuum pressure to flight instruments:
or
(2) Pressure Instrument System, BI Mod. 6/1046, is installed;
or
(3) Electrical Directional Gyro and Altitude Indicators in list of approved equipment as defined in Bombardier Report A.E.R.O.C. 6.6.G.1.

(e) "THIS AIRPLANE IS EQUIPPED FOR OPERATION IN ICING CONDITIONS" when the aircraft is equipped with Item 204.

NOTE 3. For Models DHC-6-1, -100, -200, and –300 airplanes the retirement times recorded in Bombardier Manual PSM 1-6-11 Revision 5, dated January 11, 2000, and approved by the Canadian Department of Transportation on March 3, 2000, must be complied with.

NOTE 4. Engine fire extinguisher installation accepted. System not approved until completion of successful extinguisher tests.

NOTE 5. The landing weight is 11400 lb. if the airport temperature at which the landing is to be made is at or above -20°F (-29°C). If the airport temperature is below -20°F, then the landing weight is restricted to 11000 lb.

NOTE 6. The Model DHC-6-200 or -300 aircraft may have either the long nose (BI Mod. 6/1077) or the original short nose (as per the Model DHC-6-100 aircraft) in any configuration with the exception of the floatplane version which must have a short nose.

NOTE 7. Maximum continuous single generator load is limited to:
(a) 200 amps (1.0 on loadmeter) in Flight conditions up to 125°F.
(b) 200 amps (1.0 on loadmeter) in Ground conditions up to 45°F.
(c) 160 amps (0.8 on loadmeter) in Ground conditions from 45°F to 125°F.

NOTE 8. For Models DHC-6-100, -200 and -300 airplanes intended for use in operations under FAR Part 135, one of the following must be accomplished:

(a) Modifications recorded in Bombardier Report AEROC 6.1.G.11-DHC-6 Certified Airplanes - Basic Definitions. The appropriate DOT approved BI Flight Manual Supplement is to be inserted in the Airplane Flight Manual.

(b) Equivalent modifications to (a) above in compliance with SFAR 23 as approved by the Regional Chief of an Engineering and Manufacturing Branch (Aircraft Engineering Division in Western Region) FAA.

(c) Modifications in compliance with Appendix A to FAR 135.

....END....